

## REMARKS

Claims 5-14 and 37 and new claims 39-41 are pending in this application upon entry of this paper. Claim 5 has been amended into independent form. New claims 39-41 are identical to canceled claims 2-4 with dependency on claim 5. Claims 10 and 37 have been amended to recite dependency from claim 5. Claims 1-4, 15-36 and 38 are canceled without prejudice. Applicants reserve the right to file one or more continuation, divisional, or continuation-in-part applications directed to any canceled subject matter. No new matter is added.

### **I. Rejections under U.S.C. §102(b) Should be Withdrawn**

Claims 1-4, 10-12, and 37-38 are rejected on pages 2-3 of the office action under 35 U.S.C. § 102(b) as allegedly anticipated by U.S. Patent Application Publication Number 2001-0014442 to Morris *et al.* ("Morris").

Applicants respectfully submit that the claims have been amended to overcome the rejection. Particularly, the claims, as amended, are not subject to the instant rejection.

Accordingly, Applicants respectfully request that the rejection of claims 1-4, 10-12, and 37-38 under 35 U.S.C. § 102(b) as allegedly anticipated by Morris be reconsidered and withdrawn.

Claims 1-2, 13-14, and 37-38 are rejected on page 3 of the office action under 35 U.S.C. § 102(b) as allegedly anticipated by U.S. Patent Number 6,004,614 to Kempen ("Kempen").

Applicants respectfully submit that the claims have been amended to overcome the rejection. Particularly, the claims, as amended, are not subject to the instant rejection.

Accordingly, Applicants respectfully request that the rejection of claims 1-4, 10-12, and 37-38 under 35 U.S.C. § 102(b) as allegedly anticipated by Kempen be reconsidered and withdrawn.

## II. The Rejection Under 35 U.S.C. § 103(a) Should Be Withdrawn

Claims 1-14, 37, and 38 are rejected on pages 3-5 of the office action under 35 U.S.C. § 103(a) as obvious over Morris or Kempen in view of U.S. Patent Number 5,925,377 to Gerth ("Gerth") and further in view of Nagaoka Satoshi *et al.* J. Nutr. 1990, Oct. 120(10)1134-9 ("Satoshi").

The U.S. Supreme Court analyzed the test for obviousness in *KSR International Co. v. Teleflex Inc.*, 127 S. Ct. 1727 (2007). "There is no necessary inconsistency between the [teaching, suggestion, motivation] test and the Graham analysis. But a court errs where it transforms general principle into a rigid rule limiting the obviousness inquiry." *Id.* The Supreme Court's analysis in *KSR* relies on several assumptions about the prior art landscape. First, *KSR* assumes a starting reference point or points in the art, prior to the time of invention, from which a skilled artisan might identify a problem and pursue potential solutions. Second, *KSR* presupposes that the record up to the time of invention would give some reasons, available within the knowledge of one of skill in the art, to make particular modifications to achieve the claimed compound. See *Takeda*, 492 F.3d at 1357. Third, the Supreme Court's analysis in *KSR* presumes that the record before the time of invention would supply some reasons for narrowing the prior art universe to a "finite number of identified, predictable solutions," *KSR* 127 S. Ct. at 1742. In *Ortho-McNeil Pharmaceutical, Inc. v. Mylan Laboratories, Inc.*, 520 F.3d 1358, 1364 (Fed. Cir. 2008), the Federal Circuit further explained that this "easily traversed, small and finite number of alternatives . . . might support an inference of obviousness." However, to the extent an art is unpredictable, as the chemical arts often are, *KSR*'s focus on these "identified, predictable solutions" may present a difficult hurdle because potential solutions are less likely to be genuinely predictable. *Takeda Chemical Industries, LTD et al. v. Alphapharm PTY., Ltd.*, 492 F.3d 1350 (Fed. Cir. 2007).

The claims encompass, *inter alia*, compositions comprising on a dry matter basis (a) from 7% to 70% by weight of protein, (b) from 1% to 60% by weight of fat, (c) from 0 to 90% by weight of carbohydrate, (d) from 0 to 40% by weight of dietary fiber, (e) from 0 to 15% by weight of nutritional balancing agent, (f) 0.01% to 0.4% by weight of tyrosine,

and (g) 0.1% to 3 % by weight of phenylalanine. The claimed compositions were found to induce body weight loss in animals through reducing food intake or increasing satiety. This claimed invention allows the appropriate concentration of tyrosine and phenylalanine without the previously reported negative effects.

The combination of Morris and/or Kempen with Gerth and/or Satoshi does not provide the legally required teaching or suggestion of the claimed invention. Moreover, one of ordinary skill in the art would not have been motivated to combine or modify the teachings of the references to obtain the claimed invention.

Morris discloses food and method of utilizing an amino acid, such as tyrosine and phenylalanine, in maintaining desirable hair coloration and reversing undesirable discoloration. (See Morris at paragraph [0029], Applicants' emphasis). According to Morris, "hair color changes of animals, cats in particular, have been induced by using pure amino acid diets by adjusting the amount of phenylalanine and tyrosine in the diet. Also, it has been shown that supplementing a gelatin-based diet with tyrosine (or sufficiently high levels of phenylalanine) can prevent the hair color changes from occurring." (*Id.* at paragraph [0030]). Moreover, Morris actually teaches away from administering tyrosine. Indeed, Morris discloses, "it is noted that since phenylalanine can supply all the tyrosine that animals, such as rats need, phenylalanine is regarded as an essential amino acid and tyrosine a dispensable amino acid." (*Id.*).

Kempen discloses the use of dicarboxylic acids, dicarboxylic acid metabolites, and their derivatives as animal feed ingredients. According to Kempen, the nature of dicarboxylic acids, those having 6, 8, or 10 carbon atoms are preferred. Kempen further discloses that adipic acid is one of these dicarboxylic acids with the following chemical formula:  $\text{COOH}-(\text{CH}_2)_4-\text{COOH}$ . It is produced naturally in animals from fatty acids through a combination of beta-oxidation and omega-oxidation, and can be catabolized to yield energy. This production is especially important in conditions when the free fatty acid concentration in cells is increased, such as when fatty acid catabolism is increased, beta-oxidation is inhibited, or when medium-chain fatty acids are provided in the diet as a significant source of energy. Kempen states that no applications for dicarboxylic acids as

feed ingredients have been described until now, except as a feed preservative or as an energy source for premature infant. The present invention aims to a new application for animal feeds, including, but not limited to, feeds for farm animals such as fish, poultry, swine, and cattle. Thus, Kempen encompasses compositions including dicarboxylic acids.

Gerth and Satoshi do not remedy the deficiencies of Morris and/or Kempen.

Gerth is limited to a dietary supplement and does not disclose or suggest the pet food compositions currently claimed. Kempen discloses dietary supplements that are useful in nutrition and weight loss. According to Kempen, the invention relates to a dietary supplement composition combining, in one embodiment, amino acids, minerals, vitamins, herbs, and essential nutrients together with gentle diuretics and digestive enzymes. The composition is developed particularly for persons who desire to lose 10-200 pounds, while maintaining the essential nutritional requirements of vitamins, minerals, and nutrients. Therefore, Kempen does not disclose or suggest a pet food composition including tyrosine and phenylalanine.

Satoshi discloses that excess dietary tyrosine causes hypercholesterolemia and affects bile acid metabolism and mixed-function oxidase system. Thus, Satoshi also teaches away from using tyrosine in an animal feed.

Therefore, the combination of references does not disclose or suggest pet food compositions including protein, fat, carbohydrate, dietary fiber, nutritional balancing agent(s), tyrosine, and phenylalanine, much less these ingredients in the claimed amounts. Indeed, nothing in the combination of references would suggest to one of ordinary skill in the art at the time of the invention the compositions recited by the claims or suggest a reason to pursue potential solutions. *See KSR*. Moreover, Morris and Satoshi actually teach away from using tyrosine in a food composition, which clearly would not suggest the claimed invention. Applicant submits that the combination of references does not provide any reasons available within the knowledge of one of skill in the art to make particular modifications to achieve the claimed invention. *See Takeda*, 492 F.3d at 1357. Finally, the combination of references does not supply any reasons for narrowing the prior art universe to a “finite number of identified, predictable solutions” (*i.e.*,

compositions for pet foods including, *inter alia*, tyrosine and phenylalanine). KSR 127 S. Ct. at 1742.

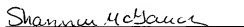
Based on at least the arguments set forth above, Applicant respectfully submits that the combination of references does not provide the legally required suggestion or motivation to modify its teachings to obtain the claimed invention. Because the legally required suggestion of each and every element of the claimed invention is not present in the cited references, Applicants respectfully request that the rejection of claims 1-14, 37, and 38 under 35 U.S.C. § 103(a) should be reconsidered and withdrawn.

For at least this reason, Applicants submit that the rejection of claims 1-14, 37, and 38 under 35 U.S.C. § 103(a) as allegedly obvious over Morris or Kempen alone or in view of to Gerth and/or Satoshi should be reconsidered and withdrawn.

### III. Conclusion

For at least the reasons discussed above, Applicants believe that the claims are allowable. Further and favorable consideration is solicited. The Examiner is invited to telephone the undersigned if that would be helpful to resolving any issues.

Respectfully submitted,



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